

Date: Wednesday, 12/13/2006 2:46:45 PM  
 User: Kim Johnston

## Process Sheet

Customer	CU-DAR001 Dart Helicopters Services		Drawing Name	TUBE ASSEMBLY		
Job Number	29929		Part Number	D2003009		
Estimate Number	11914		Drawing Number	UNDER REVIEW CB 06.12.13		
P.O. Number	N/A		Project Number	N/A		
This Issue	12/13/2006 S.O. No. : N/A		Drawing Revision	B SEE NOTE ON DWG		
Prsht Rev.	NC		Material	N/A		
First Issue	N/A		Type	SMALL /MED FAB		
Previous Run	N/A		Due Date	1/10/2007 Qty: 5 Um: Each		
Written By						
Checked & Approved By						
Comment	Est B90.12.21 Re-format EC					

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	M6061T6T0375W035	6061-T6 Tube .375 x.035W	
		Comment: Qty.: 1.0884 f(s)/Unit Total : 5.4422 f(s) Cut as per template D2003-007 (12.44" long) Material: 3/8" x 0.035" wall 6061-T6 tubing Batch: M17931	
		Cut: 12.38" long as per Dwg D2003 Material: M2650-6 Heat sleeve Batch: M17931 m17521	FF 07-01-02
2.0	M26506	Firesleeve-crkl .375IDia	
		Comment: Qty.: 1.0400 f(s)/Unit Total : 5.2000 f(s) Firesleeve-crkl .375IDia	MF. 07-01-11
3.0	MS208196D	Sleeve	
		Comment: Qty.: 2.1000 Each(s)/Unit Total : 10.5000 Each(s) Pick:	
		Qty Part Number Description Batch	
2	MS20819-6D	Sleeve	M17654
			FF 07-01-02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes  No  DQA:  Date: 07/01/12  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 12/13/2006 2:46:45 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 29929

Part Number: D2003009

Job Number:



Seq. #: Machine Or Operation:

Description :

4.0 AN8186D Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 10.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
2	AN818-6D	Nut	M17651

FF 07-01-02

5.0 D2182 Heat Shrink



Comment: Qty.: 0.3750 f(s)/Unit Total : 1.8750 f(s)

Pick:

Qty	Part Number	Description	Batch
1	D2182-045	Heat shrink	B28164A

MF . 07-01-11

6.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Form tube as per template D2003-009

2-Assemble as per Dwg D2003

FF 07-01-02

MF . 07-01-11

7.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/01/11 (S)

8.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: STAIRS

07/01/12 (S)

9.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/01/12 (S)

Job Completion



07/01/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr.	Approval QC Inspector
<del>10/10/08</del>	<del>SC</del>						

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. B
		D2003	SHEET 1 OF 2
DATE		TITLE	SCALE
99.06.08		206 CABIN HEATER TUBE ASSEMBLIES NTS	
A	90.04.09	NEW ISSUE	
B	99.06.08	UPDATE PER TEMPLATES; ADD P/N'S; 0.025 TUBING NOW 0.035 (TSR1049)	

**RELEASED**

49.06.08 RE

**UNDER REVIEW**

CB

Some flat 06.12.13  
lengths wrong

SHOP COPY  
RETURN TO  
ENGINEERING

NOTE: FLAT LENGTHS MAYBE  
INCORRECT. BEND TO BENT  
TOOL. REPORT TO ENGINEERING

CL.08.21 CB

P/N	TEMPLATE	HEATSLEEVE LENGTH <sup>1</sup>	CUT LENGTH OF TUBE <sup>2</sup>	MS20819-8J SLEEVE		MS20819-8D SLEEVE		AN818-8D NUT		AN818-6D NUT		DESC.	MATERIAL <sup>4/87</sup>	UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WORK ORDER NO. 299/29	VENDOR OR SPEC
				MS20819-8J NUT	MS20819-8D NUT	MS20819-8D SLEEVE	AN818-8D NUT	AN818-6D NUT	AN818-6D NUT	AN818-6D NUT	AN818-6D NUT				
D2003-001	T2003-001	5.2	6.00				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-003	T2003-003	7.3	8.12				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-005	T2003-005	9.8	10.62				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-007	T2003-007	20.0	19.63				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-009	T2003-009	12.38	12.44				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-011	T2003-011	33.31	32.38				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-013	T2003-013	12.7	13.54				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-015	T2003-015	17.2	18.00				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-017	T2003-017	17.0	16.25				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-019	T2003-019	9.8	10.62		2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWV-T-700/6				
D2003-021	T2003-021	N/A	2.25		2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWV-T-700/6				
D2003-023	T2003-023	4.5	5.33		2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWV-T-700/6				
D2003-025	T2003-025	9.8	10.60		2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWV-T-700/6				
D2003-027	T2003-027	7.25	7.38		2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWV-T-700/6				
D2003-029	T2003-029	17.2	18.00		2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWV-T-700/6				
D2003-031	T2003-031	14.6	15.38	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-033	T2003-033	29.75	29.62	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-035	T2003-035	24.7	27.00	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-037	T2003-037	24.81	23.38	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-039	T2003-039	34.0	34.00	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-041	T2003-041	6.0	5.88	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-043	T2003-043	11.7	10.75	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-045	T2003-045	3.50	2.44	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-047	T2003-047	5.56	5.56	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-049	T2003-049	33.2	34.00	2	2				TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304				
D2003-077	T2003-077	N/A	6.25				1	1	JET	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-101	T2003-101	13.25	13.13				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-600/6				
D2003-103	T2003-103	12.38	12.00				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-600/6				
D2003-105	T2003-105	10.75	10.60				-2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-600/6				
D2003-107	T2003-107	12.75	12.25				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-600/6				
D2003-109	T2003-109	8.25	8.125		2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWV-T-600/6				
D2003-111	T2003-111	4.75	4.625		2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WWV-T-600/6				
D2003-116	T2003-116	4.0							HEATSLEEVE	M2650-20 CRINKLE-SOFT	STRATOFLEX				
D2003-120	T2003-120	4.0							HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX				
D2003-14	T2003-14	4.0							HEATSLEEVE	M2650-14 CRINKLE-SOFT	STRATOFLEX				
D2003-16	T2003-16	4.0							HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX				
D2003-205	T2003-205	9.75	9.60				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				
D2003-207	T2003-207	3.75	3.75				2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WWV-T-700/6				



ISSUED  
ACGOS

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO. D2003
DATE		TITLE 206 CABIN HEATER TUBE ASSEMBLIES NTS

RELEASED  
99.06.08 KE

UNDER REVIEW

CB  
06.12.13

Notes:

- (1) USE STRATOFLEX M2650-6 CRINKLE-SOFT HEATSLEEVE.
- (2) TUBING ASSEMBLIES TO BE CUT AND BENT IN ACCORDANCE WITH TEMPLATES.
- (3) TUBES TO BE FLARED 30° TO MATE WITH FITTINGS MADE TO MS33514.
- (4) ENSURE SEAMLESS TUBING IS USED.
- (5) INSTALL HEATSLEEVE OVER ALL TUBES WITH A DESIGNATED LENGTH OF HEATSLEEVE PER THE PARTS LIST.
- (6) 5052 (WW-T-700/4) TUBING MAY BE SUBSTITUTED WHEN 6061 TUBING IS NOT AVAILABLE.
- (7) 0.049 WALL THICKNESS CRES TUBING MAY BE SUBSTITUTED WHEN 0.035 IS NOT AVAILABLE.
- (8) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

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WORK ORDER  
NO. 29929

